

The invention claimed is:

1. An arbor assembly for mounting a hole saw to a drill, the arbor assembly comprising:

a shank for engagement with the drill;

5 an adaptor for supporting the hole saw, said adaptor being mounted to said shank; and

means for locking said adaptor in engagement with said shank and for unlocking said adaptor from engagement with said shank.

10 2. An arbor assembly as defined in claim 1, wherein said shank includes a shank passageway and a portion of said adaptor is mounted within said shank passageway.

3. An arbor assembly as defined in claim 2, wherein a portion of said shank passageway includes flats and said adaptor includes flats on an exterior surface, wherein said flats on said portion of said shank passageway mate with said flats on said exterior surface of said adaptor.

15 4. An arbor assembly as defined in claim 2, wherein said means for locking includes at least one ball passageway in said shank and a ball groove in said adaptor, and wherein when said adaptor is positioned within said shank passageway, said at least one ball passageway is aligned with said ball groove.

20 5. An arbor assembly as defined in claim 4, wherein said means for locking further includes at least one locking ball positioned within said at least one ball passageway.

6. An arbor assembly as defined in claim 5, wherein said means for locking further includes a sleeve, a ball protrusion extending from an inner surface of said

sleeve for moving said locking ball into engagement with said ball groove of said adaptor.

7. An arbor assembly as defined in claim 1, further including a C-ring recess on an outer surface of said shank; a C-ring positioned therein; and said means for locking includes a sleeve, a locking protrusion extending from an inner surface of said sleeve, and wherein when said locking protrusion is positioned distally of said C-ring to lock said assembly and said locking protrusion is positioned proximally of said C-ring to unlock said assembly.

8. An arbor assembly as defined in claim 1, wherein said shank includes a set screw passageway and a set screw positioned within said set screw passageway.

9. An arbor assembly as defined in claim 8, wherein said means for locking includes a sleeve, a set screw recess in said sleeve and said sleeve is maintained on said shank due to the engagement between said set screw and said set screw recess.

10. An arbor assembly as defined in claim 8, wherein said means for locking includes a sleeve and a set screw access passageway in said sleeve.

11. An arbor assembly as defined in claim 1, wherein said adaptor includes a nose for positioning within an aperture through a backplate of a hole saw.

12. An arbor assembly as defined in claim 11, wherein said nose of said adaptor includes a thread on the outer surface thereof.

13. An arbor assembly as defined in claim 12, further including a bushing mounted to said nose of said adaptor.

14. An arbor assembly as defined in claim 1, further including a pilot drill bit mounted with said shank.
15. An arbor assembly as defined in claim 1, further including an O-ring positioned between said shank and said adaptor.
- 5 16. An arbor assembly for mounting a hole saw to a drill, the arbor assembly comprising:
- a shank for engagement with the drill;
  - an adaptor for supporting the hole saw, slidably engaged with said shank;
  - a sleeve slidably engaged with said shank; and
- 10 means associated with said sleeve for locking said adaptor in engagement with said shank and for unlocking said adaptor from engagement with said shank.
17. An arbor assembly as defined in claim 16, wherein said adaptor is locked in engagement with said shank when said sleeve is moved to a distal position and said adaptor is unlocked in engagement with said shank when said sleeve is moved to a proximal position.
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18. An arbor assembly as defined in claim 16, wherein said means associated with said sleeve includes at least one locking ball, and wherein said shank includes at least one ball passageway; said adaptor includes a ball groove aligned with said ball passageway, and said sleeve moves said locking ball into said at least one ball passageway and into said ball groove when said adaptor is locked in engagement with said shank.
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19. An arbor assembly as defined in claim 16, further including a set screw mounted to said shank and wherein said set screw engages said sleeve.

20. An arbor assembly as defined in claim 16, further including a pilot drill bit mounted within said shank.